APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Dreiss, Fuhlendorf, Steimle & Becker
Patentanwalte
Postfach 10 37 62
D-70032 Stuttgart,
GERMANY

EXAMINER
CHERY, DADY

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☐ Responsive to communication(s) filed on *26 March 2009*.
2a) ☐ This action is **FINAL**.   2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☐ Claim(s) *4-20, 22 and 28 -30* is/are pending in the application.
    4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) *4-20, 22 and 28 -30* is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
    a) ☐ All b) ☐ Some * c) ☐ None of:
      1. ☐ Certified copies of the priority documents have been received.
      2. ☐ Certified copies of the priority documents have been received in Application No. _____.
      3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

This is in response to an amendment/response filed on March 26th 2009.

Claims 4-10, 15,16,19,20 and 22 have been amended.

Claims 1—3, 21 and 23 -27 have been cancelled.

Claims 28 -30 have been added.

Claims 4-20, 22 and 28 -30 are currently pending.

Response to Arguments

1.   Applicant's arguments filed March 26th 2009 have been fully considered but they are not persuasive. However, upon further consideration, a new ground(s) of rejection is made over Hopkins in view of Fellman which teaches a master node that initiates a communication cycle with a predetermined trigger signal **(Col. 10, lines 54 –Col. 11, lines 5)**.

Claim Rejections - 35 USC § 102

2.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3.   Claims 16,20,28,29 and 30 are rejected under 35 U.S.C. 102(b) as being anticipated by Hopkins et al. (US Patent 4,161,786, hereinafter Hopkins).

Regarding claims 19 , 28,29 and 30, Hopkins discloses a method and a computer readable storage medium storing a program having computer-executable

instructions when executed by a processor to execute a method for transmitting data within a communication system **(fig. 1),** the communication system comprising a communication media **(10,12)** and a number of nodes **(14,16)** connected to the communication media, the method comprising the steps of:

a) defining a first communication cycle having a plurality of first time slots**(Col. 2, lines 43 – 60, which recites a method for allocating primary time slots);**

b) assigning each first time slot to one or more nodes**(Col. 3, lines 39 -45, which recites a dual mode where a primary time slot is assigning to a set of terminals);**

c) triggering the first communication cycle with a time trigger**(Col. 4, lines 66 – Col. 5, lines 4 and Col. 5, lines 36 -44, which recites the BIU triggering a time during the first cycle);**

d) transmitting data across the communication media during the first communication cycle in a time triggered communication mode in response to step c)**(Col. 6, lines 16 – 26, which recites transferring data according to the first cycle)** ;

e) defining a second communication cycle having a plurality of second time slots**(Col. 3, lines 1- 18, which recites a method of defining a second communication cycle having a secondary time slot);**

f) assigning each second time slot to one or more nodes**(Col. 3, lines 45 48, which recites a second set of time slots are assigned to different nodes);**

g) triggering the second communication cycle with an external or internal event trigger**(Col. 4, lines 66 – Col. 5, lines 4 and Col. 5, lines 36 -44, which recites the BIU triggering a time during the first cycle);**

; and

h) transmitting data across the communication media during the second communication cycle in an event triggered communication mode in response to step g)**(Col. 6, lines 24 35, which recites transferring data according to the second cycle).**

Hopkins discloses performing/trigging dual mode (e.g. two cycles) of transmission between subscriber devices/BIUs where in one mode (i.e. first communication cycle) primary time slots are assigned and transmitted, then the other mode (i.e. second communication cycle) the remaining time slots are assigned, then transmitting accordingly, in TDMA scheme.

Where the BIU **(22)** is the means for assigning, triggering and defining time slot and the subscribers **(14, 16)** are the means for transferring data across the communication media.

Regarding claim 20, Hopkins discloses the computer readable medium of claim 19, wherein the computer program is stored in one of a read-only- memory (ROM), a random-access-memory (RAM), and a flash-memory **(Fig. 1, every computer has memory (RAM and ROM)..**

Claim Rejections - 35 USC § 103

4.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5.   The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148

USPQ 459 (1966), that are applied for establishing a background for determining

obviousness under 35 U.S.C. 103(a) are summarized as follows:

1.   Determining the scope and contents of the prior art.
2.   Ascertaining the differences between the prior art and the claims at issue.
3.   Resolving the level of ordinary skill in the pertinent art.
4.   Considering objective evidence present in the application indicating obviousness or nonobviousness.

6.   This application currently names joint inventors. In considering patentability of

the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of

the various claims was commonly owned at the time any inventions covered therein

were made absent any evidence to the contrary. Applicant is advised of the obligation

under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was

not commonly owned at the time a later invention was made in order for the examiner to

consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g)

prior art under 35 U.S.C. 103(a).

7.   Claims 4- 18 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable

over Hopkins in view of Fellman.

Regarding claim 4, Hopkins discloses all the limitations of claim 4 as applied

above except one *of the nodes of the communication system is defined as a master*

node, which initiates said communication cycle in conjunction with a predetermined

trigger signal. However, Fellman teaches one *of the nodes of the communication*

system is defined as a master node, which initiates said communication cycle in

conjunction with a predetermined trigger signal **(Col. 10, lines 54 –Col. 11, lines 5,**

Where the common time reference is considered as a predetermined trigger signal).

Therefore, It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teaching of Hopkins with the teaching of Fellman by using the above feature such as one *of the nodes of the communication system is defined as a master node, which initiates said communication cycle in conjunction with a predetermined trigger signal for the purpose* of eliminate collision fro time-sensitive traffic and guarantee timely delivery **(Abstract).**

Regarding claim 5, Hopkins discloses all the limitations of claim as applied above, except *the master node receives the trigger signal. However,* Fellman teaches the *master node receives the trigger signal* **(Col. 10, lines 62 –64, where the assigning of the signal is considered as receiving the signal).**

Therefore, It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teaching of Hopkins with the teaching of Fellman by using the above feature such as *the master node receives the trigger signal* for the purpose of eliminate collision fro time-sensitive traffic and guarantee timely delivery **(Abstract).**

Regarding claim 6, Hopkins discloses all the limitations of claim 6 as applied above, except *the master node generates the trigger signal* , However, Fellman teaches *the master node generates the trigger signal* **(Col. 10, lines 64 – 66, Where the master**

device generate a trigger signal that uses for synchronizing other slaves devices).

Therefore, It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teaching of Hopkins with the teaching of Fellman by using the above feature such as *the master node generates the trigger signal* for the purpose of eliminate collision fro time-sensitive traffic and guarantee timely delivery **(Abstract).**

Regarding claim 7, Hopkins discloses all the limitations of claim 7 as applied above, except *a method wherein execution of the communication cycle is suspended until the master node receives or generates the trigger signal.* However, Fellman teaches *a method wherein execution of the communication cycle is suspended until the master node receives or generates the trigger signal* **(Col. 12, lines 45 –Col. 13, lines 12, Where the indication of no device is allowed to transmit (col. 23, lines 6- 9) is considered as suspended until the master device receives or generates the trigger signal).**

Therefore, It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teaching of Hopkins with the teaching of Fellman by using the above feature such as *a method wherein execution of the communication cycle is suspended until the master node receives or generates the trigger signal* for the purpose of eliminate collision fro time-sensitive traffic and guarantee timely delivery **(Abstract).**

Regarding claim 9, Hopkins discloses all limitations of claim 9 as applied above, except a method where during a guard phase, which is period of time, the network is quiet any packet cannot be transmitted. However, Fellman discloses a method where during a guard phase, which is period of time, the network is quiet any packet cannot be transmitted (Col. 14, lines 25 – 27).

Therefore, It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teaching of Hopkins with the teaching of Fellman by using the above feature such as a method where during a guard phase, which is period of time, the network is quiet any packet cannot be transmitted for the purpose of eliminate collision fro time-sensitive traffic and guarantee timely delivery **(Abstract).**

Regarding claim 10, Hopkins discloses all the limitations of claim 10 as applied above, except a *method wherein the master node issues an event indication signal (EIS) upon receipt or generation of said trigger signal, the other nodes of the communication system being defined as slave nodes which receive said event indication signal and which resume execution of said communication cycle upon reception of said event indication signal.* However, *Fellman* teaches *a method wherein the master node issues an event indication signal (EIS) upon receipt or generation of said trigger signal* **(Col. 10, lines 57 – Col. 11, lines 5),** *the other nodes of the communication system being defined as slave nodes which receive said event indication signal and which resume execution of said communication cycle upon reception of said event indication signal* **(Col. 11, lines 6 –15).**

Therefore, It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teaching of Hopkins with the teaching of Fellman by using the above feature such as a *method wherein the master node issues an event indication signal (EIS) upon receipt or generation of said trigger signal, the other nodes of the communication system being defined as slave nodes which receive said event indication signal and which resume execution of said communication cycle upon reception of said event indication signal* for the purpose of eliminate collision fro time-sensitive traffic and guarantee timely delivery **(Abstract).**

Regarding claim 11, Hopkins discloses all the limitations of claim 11 as applied above, except *a method wherein said communication cycle comprises a cycle gap into which said nodes enter to suspend execution of the communication cycle, wherein the master node issues said event indication signal and the slave nodes receive the event indication signal to resume execution of said communication cycle.* However, Fellman discloses *a method wherein said communication cycle comprises a cycle gap (***Fig. 9A,19)** *into which said nodes enter to suspend execution of the communication cycle* **(fig. 9Aand fig. 9B, the standard interpacket gap IPG is considered as the cycle gap),** *wherein the master node issues said event indication signal and the slave nodes receive the event indication signal to resume execution of said communication cycle* **(Col. 11, lines 6 –14).**

Therefore, It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teaching of Hopkins with the teaching of Fellman by using the above feature such as *a method wherein said communication*

cycle comprises a cycle gap into which said nodes enter to suspend execution of the communication cycle, wherein the master node issues said event indication signal and the slave nodes receive the event indication signal to resume execution of said communication cycle for the purpose of eliminate collision fro time-sensitive traffic and guarantee timely delivery **(Abstract)**.

Regarding claims 12 and 14, Hopkins discloses all the limitations of claims 12 and 14 as applied above, except *the method wherein the event indication signal is used for synchronizing the slave nodes.* However, Fellman teaches *the method wherein the event indication signal is used for synchronizing the slave nodes* **(Col. 10, lines 64 – 66).**

Therefore, It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teaching of Hopkins with the teaching of Fellman by using the above feature such as *the method wherein the event indication signal is used for synchronizing the slave nodes* for the purpose of eliminate collision fro time-sensitive traffic and guarantee timely delivery **(Abstract).**

Regarding claim 13, Hopkins discloses *the method wherein said event indication signal is defined as a low/high/low sequence, wherein a high/low transition is used as a synchronizing event for said slave nodes* **(Col. 3, lines 55 –66 and col. 5, lines 49 –Col. 6, -11).**

Regarding claim 15, Hopkins discloses all the limitations of claim 15 as applied above, except *the method wherein the trigger signal is generated in the master node.*

However, Fellman discloses *the method wherein the trigger signal is generated in the master node* **(Col. 10, lines 64 –66).**

Therefore, It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teaching of Hopkins with the teaching of Fellman by using the above feature such as *the method wherein the trigger signal is generated in the master node* for the purpose of eliminate collision fro time-sensitive traffic and guarantee timely delivery **(Abstract).**

Regarding claim16, Hopkins discloses all the limitations of claim 16 as applied above, except *the method wherein the trigger signal is applied to the master node from a unit external to the master node.* However, Fellman teaches *the method wherein the trigger signal is applied to the master node from a unit external to the master **node** ***(Col. 15, lines 27 30).**

Therefore, It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teaching of Hopkins with the teaching of Fellman by using the above feature such as *the method wherein the trigger signal is generated in the master node* for the purpose of eliminate collision fro time-sensitive traffic and guarantee timely delivery **(Abstract).**

Regarding claim 17, Hopkins discloses *the method wherein the communication cycle comprises a static segment with time slots of a predefined size and in a predefined order* (Col. 2, lines 43- 60).

Regarding claim 18, Hopkins discloses the method wherein the communication cycle comprises a dynamic segment with time slots for transmitting a variable number of frames of variable length and variable order **(Fig. 2, and col. 6, lines 37- 54).**

Regarding claim 22, Hopkins discloses all the limitations of claim 22 as plied above, except *the node wherein the event receiving means accommodate a predefined trigger signal, wherein said means for initiating said communication cycle initiate said communication cycle upon receipt of said trigger signal.* However, Fellman teaches *the node wherein the event receiving means accommodate a predefined trigger signal, wherein said means for initiating said communication cycle initiate said communication cycle upon receipt of said trigger signal* **(Col. 10, lines 57 –col. 11, lines 5).**

Therefore, It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teaching of Hopkins with the teaching of Fellman by using the above feature such as the node wherein the event receiving means accommodate a predefined trigger signal, wherein said means for initiating said communication cycle initiate said communication cycle upon receipt of said trigger signal for the purpose of eliminate collision fro time-sensitive traffic and guarantee timely delivery **(Abstract).**

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DADY CHERY whose telephone number is (571)270-1207. The examiner can normally be reached on Monday - Thursday 8 am - 4 pm ESt.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Huy D. VU can be reached on 571-272-3155. The fax phone number for the

organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the

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system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Dady Chery/
Examiner, Art Unit 2416

/Huy D. Vu/

Supervisory Patent Examiner, Art Unit 2416